Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: Mountain Water Company
1345 W. Broadway
Missoula, MT 59806

2. Type of action: Application For Beneficial Water Use Permit 76H 30063539
Application to Change a Water Right 76H 30063540

3. Water source name: Groundwater – Permit Application 76H 30063539
Miller Creek and Groundwater – Change Application 76H 30063540

4. Location affected by project: Sections 19 and 20, T12N, R19W, Missoula County
Sections 1, 2, 10, 11, 13, 14, 17, 22 & 23, T12N, R20W, Missoula County

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

On June 28, 2012, Mountain Water Company (Applicant) submitted a Combined Application for Beneficial Water Use Permit No. 76H-30063539 and Change 76H-300635400 to the Missoula Regional Water Resources Office of the Department of Natural Resources and Conservation (Department or DNRC) for use of groundwater to be diverted from three wells at a maximum combined flow rate of 2000 gallons per minute (GPM), up to 622.9 acre-feet (AF) per year.

The Applicant proposes to divert ground-water, by means of a well field consisting of three production wells (PWS-1, PWS-2 and PWS-3) constructed to depths of 68 feet, 71 feet and 79 feet capable of diversion rates of 1,000 GPM, 1,000 GPM and 770 GPM. The proposed period of diversion and use is from January 1 through December 31 at a maximum flow rate of 2,000 GPM, up to 622.9 AF annually, from a point in the SE¼ NW¼ NW¼ Section 14, Township 12 North, Range 20 West, Missoula County for Municipal use. The Applicant proposes to supply irrigation water to 176.8 acres of lawn, garden and park ground and to supply domestic water to 1,477 new connections, consisting of both single family and multi-family units, within the Teton Addition at Maloney Ranch, Miller Creek View and Linda Vista subdivisions. The proposed new use is within the exterior boundaries of Applicant's municipal service area and generally located in the Miller Creek area on the southerly edge of Missoula City limits. The proposed diversion will ultimately be manifold with the Applicant's existing municipal water delivery system to use anywhere within the service area for emergency well maintenance purposes.

The Applicant determined that the new groundwater use will cause a net depletion to the Bitterroot River and proposes to address this depletion by changing the purpose and place of use of a set of existing water rights to mitigation.

This change application proposes to change the purpose and place of use of three sets of existing water rights to offset the consumptive water use described in the accompanying *Beneficial Water Use Application 76H-30063539*. The water rights proposed for change consist of Miller Creek surface water rights used for irrigation and an unperfected groundwater source provisional permit for multiple domestic and irrigation use. The Miller Creek surface water rights will no longer be diverted into their respective historic ditch systems and used for irrigation on a combined total of 233 acres. The water historically diverted and consumed on this acreage will be left in Miller Creek and allowed to recharge the groundwater aquifer in the lower Miller Creek Valley, which is tributary to the Bitterroot River. The groundwater well that is the subject of the unperfected provisional permit will be permanently retired and the amount of water that would have been consumed under operation of this permit will be left in the lower Miller Creek groundwater aquifer to offset predicted depletions.

The proposed water use will provide the benefit of a reliable domestic and irrigation water supply to the proposed Teton Addition at Maloney Ranch, Miller Creek View and Linda Vista subdivisions.

The DNRC shall issue a water use permit if an applicant proves the criteria in MCA 85-2-311 are met and the groundwater appropriation right in a closed basin statutes found in MCA 85-2-360 through 85-2-364 are satisfied.

The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-402 MCA are met.

Scope of Analysis
This environmental assessment analyzes the potential impacts of the proposed action, which is for the use of groundwater for municipal purposes at a rate of 2000 GPM up to 622.9 AF, and to authorize the use of existing irrigation water rights to mitigate depletion to surface water in the Bitterroot Basin, as described in more detail later in this EA.

There is potential that the Teton Addition at Maloney Ranch, Miller Creek View and Linda Vista subdivisions will be served by these water applications. This EA focuses on impacts from the water development only. Review of the subdivisions and their impacts involves multiple agencies including Mt Department of Environmental Quality, MT Department of Transportation, Missoula County Commissioners, Missoula County Office of Planning and Grants, and possibly others.

6. Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)

Montana Natural Heritage Program	Species of Concern
Missoula Valley Soil Survey	Soil data

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

Determination: Not applicable, the proposed source of supply is groundwater.

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

Determination: Not applicable, the proposed source of supply is groundwater.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

The Applicant quantified stream depletion using a numerical groundwater flow model. Depletion was calculated to occur in the Bitterroot River and Plummers Slough at rates ranging from a low of 0.197 CFS during winter months to a high of 1.972 CFS in July, with an annual total volume of 571.70 AF. The Applicant proposes to change several historic Miller Creek irrigation water rights and one unperfected provisional permit and allow the historically consumed volume of water to infiltrate into the local shallow groundwater aquifer in the Miller Creek valley. Using these historic water rights for mitigation will partially offset the predicted depletion to the Bitterroot River, reducing the annual net depletion to the Bitterroot River by 390.69 AF. The following table lists monthly depletion and mitigation amounts:

Month	Bitterroot River Depletion Before Mitigation		Bitterroot River Depletion After Mitigation	
January	0.197 CFS	12.08 AF	0 CFS	0 AF
February	0.197 CFS	10.91 AF	0 CFS	0 AF
March	0.534 CFS	32.78 AF	0.337 CFS	20.70 AF
April	0.745 CFS	44.27 AF	0.414 CFS	24.59 AF
May	0.679 CFS	41.69 AF	0 CFS	0 AF
June	0.966 CFS	57.37 AF	0 CFS	46.65 AF
July	1.972 CFS	121.04 AF	0.760 CFS	41.05 AF
August	1.794 CFS	110.11 AF	0.669 CFS	29.10 AF
September	1.255 CFS	74.52 AF	0.490 CFS	0 AF
October	0.377 CFS	23.11 AF	0 CFS	18.92 AF

November	0.543 CFS	31.73 AF	0.318 CFS	18.92 AF
December	0.197 CFS	12.08 AF	0 CFS	0 AF
Total		571.70 AF		181.01 AF

The median of the mean monthly flow of the Bitterroot River in the effected reach ranges from a low of 791 cfs in January to a high of 7354 cfs in June. The following table lists the median of the mean monthly flows for the Bitterroot River in the effected reach.

Month	Bitterroot River Flow MMF CFS
Jan	791
Feb	816
March	1151
April	2601
May	6341
June	7354
July	2457
Aug	930
Sept	821
Oct	938
Nov	971
Dec	872

Depletion amounts after mitigation will not cause a measurable reduction in river flows.

Determination: No significant impact.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

To document affects to existing groundwater users, the Applicant used a groundwater flow model to simulate potential drawdown on wells within the zone of influence from pumping the groundwater wells. Aquifer properties used in the model were obtained from aquifer tests performed by the Applicant. The Applicant performed a 72-hour aquifer test on PWS-2 on October 18, 2007; a 24-hour aquifer test on PW-3 on October 26, 2007; and a 24-hour aquifer test on PWS-1 on October 31, 2007. All aquifer tests were performed in accordance with the Aquifer Testing requirements found in ARM 36.12.121. Drawdown data from observation wells was analyzed using the Neuman, Theis and Cooper Jacob solutions. Estimates for transmissivity ranged from 71,278 to 223,392 ft^2/day. Long term drawdown effects to existing wells were evaluated after 5 years of simulated pumping using monthly pumping rates based on the requested volume and crop irrigations needs. Predicted drawdown in wells within the zone of influence ranges from 0.01 feet to 0.84 feet. The Applicant provided a table listing existing groundwater users and available drawdown in those wells when available. Drawdown values of 0.01 to 0.84 feet in neighboring wells will not prevent these groundwater users from reasonably exercising their rights or limit future well development in the project vicinity.

The Applicant's modeled depletion to the Bitterroot River after mitigation shows depletion amounts ranging from a low of 0.337 cfs to a high of 0.760 cfs. Depletions of this magnitude will not lower stage in the Bitterroot River sufficiently to result in channel impacts, or cause

barriers to fish migrations. The proposed project does not require any construction in riparian areas and will not result in impacts to riparian areas.

Determination: No significant impact.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species *- Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

The Montana Natural Heritage Program was contacted to determine if there are any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern", that inhabit the area affected by the proposed project. The Montana Natural Heritage Program queried their database for the following land sections: 10, 13, 14, & 15 in Township 12 North, Range 20 West and sections 19 and 20 in Township 12 North, Range 19 West. The Montana Natural Heritage Program identified the following species in the vicinity; Bald Eagle, Flammulated Owl, Black-backed Woodpecker, Pileated Woodpecker, Grass Hopper Sparrow, Bobolink, Westslope Cutthroat Trout, Bull Trout, Fisher, Wolverine, Canada Lynx, Western Skink, a millipede.

Construction activity associated with the development of groundwater for municipal use consists of drilling three wells in the proposed well field and installation of the buried transmission line and storage tanks. The well field site is located on private land in the lower Miller Creek valley that has been in agricultural production during the last century. The general project vicinity is located on the foothills flanking the northern side of the Miller Creek valley which consists of grasslands and existing dense urban development. The proposed project site does not provide quality habitat for Fisher, Wolverine or Canada Lynx. It is not known whether identified bird species are present at the project site.

The proposed use of groundwater for municipal purposes will result in a reduction in the amount of water flowing in the Bitterroot River. The depletion amounts identified by the applicant are amount to less than 1% of the average annual flow in the Bitterroot River and are not sufficient enough to impact riparian vegetation or result in barriers to fish migration through this reach of the Bitterroot River.

Determination: No significant impact.

Wetlands *- Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: Not applicable, the proposed project does not involve any dams.

Ponds *- For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: Not applicable, the proposed project does not involve any ponds.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

The proposed project will not result in a degradation of soil quality, alteration of soil stability or moisture content. The proposed water use is for municipal purposes in proposed subdivision and will be consistent with in house water use such as cooking, washing and lawn and garden irrigation. Lawn and garden irrigation will be applied using sprinklers and hoses and the amount of water applied will not cause degradation of soil quality of stability. All unconsumed domestic in house water will be piped to the Missoula County Waste Water Treatment plant. Soils in the Miller Creek valley are not susceptible to saline seep.

Determination: No impact.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Existing vegetative cover most likely will be removed at the site during construction of the subdivisions. The existing vegetative cover consists of native grassland vegetation and noxious weeds such as spotted knapweed. Upon completion of the project the vegetative cover will consist of grass and landscaping. The project is located entirely on private property, and the applicants will be responsible for controlling noxious weeds.

Determination: No significant impact.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Adverse air quality impacts from increased air pollutants are not expected as a result of this project. The water will be diverted using submersed electric pumps. No air pollutants were identified as resulting from the applicant's proposed use of groundwater for municipal purposes. There most likely will be dust and noise at the site during construction, however, this will only occur during construction, and therefore, will be limited to a one time occurrence.

Determination: No impact.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

Determination: Not applicable, the project is not located on State or Federal lands.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

All impacts to land, water, and energy have been identified and no further impacts are anticipated.

Determination: No impact.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

The project is located in an area with no locally adopted environmental plans.

Determination: No impact.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

The proposed project will not inhibit, alter or impair access to the present recreational opportunities in the area. The project is not expected to create any significant pollution, or noise in the area that may alter the quality of recreational opportunities in the valley. The project site is located entirely on private property with no public recreational opportunities.

Determination:

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

The project does not pose a significant risk to the human health

Determination: No impact.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**XX**__ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights*.

Determination: No impact.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* None identified.

(b) *Local and state tax base and tax revenues?* None identified.

(c) *Existing land uses?* None identified.

(*d)* *Quantity and distribution of employment?* None identified.

(e) *Distribution and density of population and housing?* None identified.

(f) *Demands for government services?* None identified.

(g) *Industrial and commercial activity?* None identified.

(h) *Utilities?* None identified.

(i) *Transportation?* None identified.

(j) *Safety?* None identified.

(k) *Other appropriate social and economic circumstances?*

2. ***Secondary and cumulative impacts on the physical environment and human population:***

Secondary Impacts None identified.

Cumulative Impacts None identified.

3. ***Describe any mitigation/stipulation measures:***
No reasonable alternatives were identified in the EA.

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:***

PART III. Conclusion

1. ***Preferred Alternative*** None identified.

2 ***Comments and Responses***

3. ***Finding:***

*Yes___ No_**XX**__ Based on the significance criteria evaluated in this EA, is an EIS required?*

If an EIS is not required, explain <u>why</u> the EA is the appropriate level of analysis for this proposed action:
AN EA IS THE APPROPRIATE LEVEL OF ANALYSIS FOR THE PROPOSED ACTION BECAUSE NO SIGNIFICANT IMPACTS WERE IDENTIFIED.

Name of person(s) responsible for preparation of EA:

Name: Jim Nave
Title: Deputy Regional Manager
Date: May 17, 2011